We claim:-

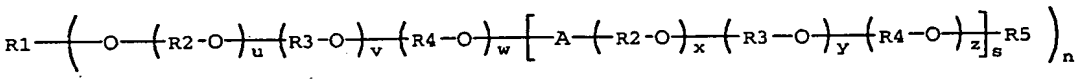
1. An aqueous polymer dispersion which is obtainable by emulsion polymerization of ethylenically unsaturated monomers in an aqueous medium in the presence of free radical polymerization initiators and stabilizers, wherein amphiphilic polymers which comprise one or more hydrophobic units (A) and one or more hydrophilic units (B) are used as a stabilizer before, during or after the polymerization, the hydrophobic units (A) being formed from a polyisobutene block, at least 50 mol% of whose polyisobutene macromolecules have terminally arranged double bonds.

2. The aqueous polymer dispersion according to claim 1, which comprises from 0.1 to 70% by weight of at least one amphiphilic polymer which comprises one or more hydrophobic units (A) and one or more hydrophilic units (B), the hydrophobic units (A) being formed from a polyisobutene block, at least 50 mol% of whose polyisobutene macromolecules have terminally arranged double bonds.

3. The aqueous polymer dispersion according to claim 1 or 2, wherein the polyisobutene block is formed from polyisobutene macromolecules, of which at least 60, preferably 80, mol%, based on the total number of the polyisobutene macromolecules, comprise terminally arranged double bonds.

4. The aqueous polymer dispersion according to any of claims 1 to 3, wherein one or more hydrophilic units (B) are formed from repeating ethylene oxide or ethylene oxide/propylene oxide units, it being possible for the proportion of propylene oxide units to be up to 50% by weight.

5. The aqueous polymer dispersion according to any of claims 1 to 3, wherein one or more hydrophilic units (B) are formed from the following formula

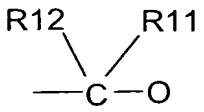


(II)

where, independently from one another,

R^1	is hydrogen, C_1–C_{24}–alkyl, R^6–C(=O)–, R^6–NH–C(=O)– or a polyalcohol radical;
R^5	is hydrogen, C_1–C_{24}–alkyl, R^6–C(=O)– or R^6–NH–C(=O)–;
R^2 to R^4	are $-(CH_2)_2-$, $-(CH_2)_3-$, $-(CH_2)_4-$, $-CH_2-CH(R^6)-$, $-CH_2-CHOR^7-CH_2-$;
R^6	is C_1–C_{24}–alkyl;
R^7	is hydrogen, C_1–C_{24}–alkyl, R^6–C(=O)– or R^6–NH–C(=O)–;

A: is –C(=O)–O, –C(=O)–D–C(=O)–O,
-CH_2-CH(-OH)-D-CH(-OH)-CH_2-O,
–C(=O)–NH–D–NH–C(=O)–O;



D is $-(CH_2)_t-$, arylene, substituted or unsubstituted;
R^{11} and R^{12} are hydrogen, C_1-C_{24}-alkyl, C_1-C_{24}-hydroxyalkyl, benzyl or phenyl;
n is 1 if R^1 is not a polyalcohol radical or
is from 1 to 500 if R^1 is a polyalcohol radical;
s is from 0 to 1000; t is from 1 to 12; u is from 1 to 2000; v is from 0 to 2000; w is from 0 to 2000;
x is from 0 to 2000; y is from 0 to 2000; z is from 0 to 2000.

6. The aqueous polymer dispersion according to any of claims 1 to 3, wherein one or more hydrophilic units (B) are formed from the following group: monoaminoethylene oxide, monothioethylene oxide, diaminoethylene oxide.

7. The aqueous polymer dispersion according to any of claims 1 to 6, wherein the polyisobutylene block is functionalized with introduction of polar groups, and the functionalized polyisobutene block is, if appropriate, then further modified.

8. The aqueous polymer dispersion according to claim 7, wherein the functionalization of the polyisobutene block is carried out by a reaction which is selected from the following list:

i) reaction with aromatic hydroxy compounds in the presence of an alkylation catalyst to give aromatic hydroxy compounds alkylated with polyisobutenes,

ii) reaction of the polyisobutene block with a peroxy compound to give an epoxidized polyisobutene,

iii) reaction of the polyisobutene block with an alkene which has a double bond substituted by electron-attracting groups (enophile), in an ene reaction,

iv) reaction of the polyisobutene block with carbon monoxide and hydrogen in the presence of a hydroformylation catalyst to give a hydroformylated polyisobutene,

v) reaction of the polyisobutene block with a phosphorus halide or a phosphorus oxychloride to give a polyisobutene functionalized with phosphono groups,

vi) reaction of the polyisobutene block with a borane and subsequent oxidative cleavage to give a hydroxylated polyisobutene,

vii) reaction of the polyisobutene block with an SO_3 source, preferably acetyl sulfate or oleum, to give a polyisobutene having terminal sulfo groups,

viii) reaction of the polyisobutene block with oxides of nitrogen and subsequent hydrogenation to give a polyisobutene having terminal amino groups.

9. The aqueous polymer dispersion according to any of claims 1 to 8, wherein the amphiphilic polymers which comprise one or more hydrophobic units (A) and one or more hydrophilic units (B) are obtainable by reaction of hydrophobic units (A) comprising a functionalized polyisobutene block with alkylene oxides or by polymer-analogous reaction with one or more polyalkylene oxides.

10. The aqueous polymer dispersion according to any of claims 1 to 9, wherein the amphiphilic polymer has an ABA structure.

11. The aqueous polymer dispersion according to any of claims 1 to 9, wherein the amphiphilic polymer has A_pB_q structures, where p and q, independently of one another, are from 1 to 8.

12. The aqueous polymer dispersion according to any of claims 1 to 11, which comprises from 0.1 to 70% by weight of blends of amphiphilic polymers.

13. The aqueous polymer dispersion according to any of claims 1 to 10 and 12, which comprises from 0.5 to 20% by weight of at least one amphiphilic polymer having a structure of the type A-B-A.

14. The aqueous polymer dispersion according to any of claims 1 to 9, 11 and 12, which comprises from 0.5 to 20% by weight of at least one amphiphilic polymer of the structure A_pB_q, where p and q, independently of one another, are from 1 to 8.

15. The aqueous polymer dispersion according to any of claims 1 to 14, wherein amphiphilic polymers composed of at least one hydrophobic block A consisting of polyisobutene and at least one hydrophilic block B consisting of polyalkylene oxide or blends of these amphiphilic polymers are used as a stabilizer, the

stabilizers having A_pB_q structures, where p and q, independently of one another, are from 1 to 8, and

A being a polyisobutene block having an average molar mass M_n of from 200 to 50 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 200 to 50 000.

16. The aqueous polymer dispersion according to any of claims 1 to 15, wherein three-block copolymers of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 200 to 50 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 200 to 50 000.

17. The aqueous polymer dispersion according to any of claims 1 to 16, wherein three-block copolymers of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 200 to 20 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 500 to 30 000.

18. The aqueous polymer dispersion according to any of claims 1 to 17, wherein three-block copolymers of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 450 to 5000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 800 to 15 000.

19. The aqueous polymer dispersion according to any of claims 1 to 17, wherein three-block copolymers composed of polyisobutene functionalized with succinic anhydride groups (PIBSA) as hydrophobic block A and of polyethylene oxide (PEO) as hydrophilic block B, of the structure A-B-A, are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 450 to 5000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 800 to 15 000.

20. A process for the preparation of aqueous polymer dispersions according to any of claims 1 to 19 by polymerization of ethylenically unsaturated monomers in an aqueous medium in the presence of free radical polymerization initiators and at least one stabilizer by an emulsion polymerization method, wherein amphiphilic polymers which comprise one or more hydrophobic units (A) and one or more hydrophilic units (B) are used as a stabilizer before, during or after the polymerization, the hydrophobic units (A) being formed from a polyisobutene block, at least 50 mol% of whose polyisobutene macromolecules have terminally arranged double bonds.

21. The process according to claim 20, wherein amphiphilic polymers composed of at least one hydrophobic block A consisting of polyisobutene and at least one hydrophilic block B consisting of polyalkylene oxide or blends of these amphiphilic polymers are used as a stabilizer, the stabilizers having structures A_pB_q, where p and q, independently of one another, are from 1 to 8, and

A being a polyisobutene block having an average molar mass M_n of from 200 to 50 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 200 to 50 000.

22. The process according to claim 20 or 21, wherein three-block copolymers of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 200 to 20 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 500 to 30 000.

23. The process according to any of claims 20 to 22, wherein three-block copolymers of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 450 to 5000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 800 to 15 000.

24. The process according to any of claims 20 to 23, wherein three-block copolymers which are composed of polyisobutene functionalized with succinic anhydride groups (PIBSA) as hydrophobic block A and of polyethylene oxide (PEO) as hydrophilic block B, of the structure A-B-A are used as a stabilizer,

A being a polyisobutene block having an average molar mass M_n of from 450 to 5000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 800 to 15 000.

25. The use of an aqueous polymer dispersion according to any of claims 1 to 19 as an associative thickener for aqueous media.

26. The use of an aqueous polymer dispersion according to any of claims 1 to 19 in paper coating slips, in textile production, as a thickener for textile print pastes, in the pharmaceutical and cosmetics sector, for surface coatings, for detergents and cleaning agents, in foods and as an oil field chemical.

27. The use according to claim 26, wherein amphiphilic polymers composed of at least one hydrophobic block A consisting of polyisobutene and at least one hydrophilic block B consisting of polyalkylene oxide or blends of these amphiphilic polymers are used as the sole stabilizer for the polymer dispersion, the stabilizers having at least one of the structures A_pB_q, where p and q, independently of one another, are from 1 to 8, and

A being a polyisobutene block having an average molar mass M_n of from 200 to 50 000

and

B being a polyalkylene oxide block having an average molar mass M_n of from 200 to 50 000.